

REMARKS

By this amendment, claims 1-6, 12-16 and 18-24 are now pending in this application. Claims 23 and 24 are added by this amendment. Each of the pending claims is believed to define an invention which is novel and unobvious. Favorable reconsideration of this case is respectfully requested.

Regarding the objection to the claims, the acronyms have been spelled out. Additionally, claims 10 and 15 have been amended to overcome the informality noted by the Examiner. In view of these amendments, the withdrawal of the objections to the claims is respectfully requested.

Claims 1, 2, 10, 12 and 13 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 5,550,906 to Chau et al.

Chau et al. describe a server for a telecommunications subsystem, such as a broadband of a multimedia subsystem or another PBX. The PBX's feature set is thus made available to the other subsystem. Also, inter-PBX feature transparency is implemented thereby. Switching node 33 includes protocol converter 40 to connect switching node 33 with PBX 13 through PRI link 10 (See col. 5, lines 16-56).

Thus, Chau et al. describes a device for connecting switching node 33 with PBX 13 by including protocol converter 40 in switching node 33. In contrast, the present application is directed to realizing voice communication without need for a PBX by adding the TLAs 30, 40 to a LAN provided with the LAN switching unit 50, and the LAN hubs 10, 20 incorporating equipment such as the PCs 1 to 4 or work stations. The TLAs include the LANC circuit 31 that is for assembling and disassembling the MAC frame.

Accordingly, it is possible to combine a voice system with a data system, which greatly contributes to reducing the cost of telecommunication infrastructure. That feature is neither taught nor suggested by Chau et al.

Chau et al. describes ISDN port circuit and protocol converter 40 not only terminates the ISDN transmission protocol of PRI link 10 but converts between the ISDN transmission protocol and the internal transmission protocol of node 33, in a conventional manner (See col. 5, lines 26-30). However, Chau et al. does not describe or suggest the internal transmission protocol of node 33. Therefore, Chau et al. does not describe or suggest digital or analog voice data transmitted and

received by at least one set of the telephone interfaces are converted into MAC frames or IP packets, and the digital or analog voice data converted into the MAC frames or IP packets are relayed to the LAN interface, example as recited in independent claim 1 (same as claim 10, 15 and 18).

In contrast, Chau et al. describes signaling information is sent or received through the signaling channel (D channel) of PRI link 10 in ISDN. This shows ISDN protocol use a time division multiplexing (TDM) as a communication method and a plurality of time slots. In order to convert a time slot into a packet, some information is needed to multiple a plurality of time slot in a line.

Chau et al. describes, directly to PBX 13 (i.e., each telephone set 18-19), the information also includes the identifying number of the PBX port 28-29 (see Fig. 1) to which the endpoint is connected. Because PBX13 is also required in the system of Fig. 1, to provide services to other endpoints (i.e., workstations 37-39), PST 133 must contain information entries 134 for these endpoints as well. However, because these endpoints are not connected directly to PBX13, their entries 134 in PST 133 differ from the entries 134 for telephone sets 18-19 in that they do not include a port identifier. (See col. 6, lines 16-28) Therefore, Chau et al. does not describe or suggest realizing the conversion between a time slot and a packet.

In contrast, the present application describes realizing the conversion between a time slot and a packet. For example, the TLA 40, upon receiving the information, adds the MAC address of the LAN – SW interface 30a of the TLA 30 and the number of the voice telephone 5 to voice data corresponding to the number of voice telephone 8, and transmits same assembled in the format shown in Fig. 3 to the LAN switching unit 50 via the LAN – SW interface 40a. On the other hand, the PC1, upon receiving response from the PC 4, transmits to the LAN – HUB interface 30b of the TLA 30 information on the number of the voice telephone 5, the MAC address of the TLA 40, and the number of the voice telephone 8 via the interface 1a and the LAN HUB 10 for routing of voice data in the direction from the voice telephone 5 to the voice telephone 8. The information describe above is delivered to the CPU 36 in the TLA 30 via the LAN BOARD 37 therein. The TLA 30, upon receiving the information, adds the MAC address of the LAN – SW interface 40a of the TLA 40 and the number of the voice telephone 8 to voice data corresponding to the number of the voice

telephone 5, and transmits same assembled in the format shown in Fig. 3 to the LAN switching unit 50 (period (B) in Fig. 4). New claim 24 is specifically addressed to this feature.

Claim 6 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Chau in view of U.S. Patent Number 6,041,114 to Chestnut.

Chestnut describes, a telecommunication system, including call forwarding, with a computer network (LAN, WAN, etc.) integrated with a private branch exchange (PBX) connected to a Public Switched Telephone Network (PSTN). Calls are forwarded based upon the device used to log onto the computer network by the called party. (See Abstract) Same as Chau et al., Chestnut just describes a telecommunication system with a computer network integrated with PBX, but does not supplement Chau et al. to describe or suggest the applicant's invention.

Claim 3-5, 11, 14-22 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Chau in view of U.S. Patent Number 5,862,134 to Deng.

Claims 3-5, 11 and 14-22 depend directly or indirectly from independent claims 1, 10, 15 and 18. And are patentable for at least the reasons discussed above regarding there respective independent claims. Deng does not supplement Chau to teach or suggest the claimed invention. Therefore the withdrawal of this rejection is respectfully requested.

For the reasons set forth above, it is respectfully submitted that the application is in condition for allowance. Early issuance of a Notice of Allowance is respectfully requested.

If the Examiner is of the opinion that the prosecution of this application would be advanced by a personal interview, the Examiner is invited to telephone undersigned counsel to arrange for such an interview.

The Commissioner is authorized to charge any fee necessitated by this Amendment to our Deposit Account No. 22-0261.

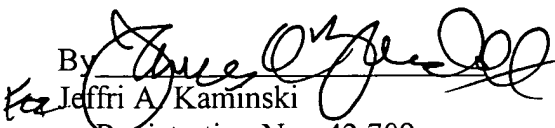
Application No. 10/701,444
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In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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